December 30, 2003

Case No.: DP-304183 (7500/60)

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CLAIM AMENDMENTS

Claims 1-27 are currently pending in the application.

Please cancel claims 1-27 without prejudice or disclaimer to the subject matter of claims 1-27.

Please add new claims 28- as shown below.

The following listing of claims 1-27 will replace all prior versions, and listings, of claims in the application:

1.-27. (Cancelled)

28. (New) A method of controlling an operation of a switched-reluctance motor including a rotor having a rotor pole and a stator having a stator pole, said method comprising:

aligning the rotor pole and the stator pole in response to a reception of an actuation command; and

subsequent to the aligning of the rotor pole and the stator pole, preliminarily cranking the rotor in a direction as dictated by the actuation command for a predetermined time period to thereby facilitate a subsequent rotation of the rotor to a holding position.

- 29. (New) The method of claim 28, further comprising: rotating the rotor to the holding position upon an expiration of the predetermined time period.
- 30. (New) The method of claim 29, further comprising:
 minimizing any current losses of the switched-reluctance motor subsequent to
 rotating the rotor to the holding position.

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- 31. (New) The method of claim 29, further comprising:
 minimizing any heating losses of the switched-reluctance motor subsequent to rotating the rotor to the holding position.
- 32. (New) A method for controlling an alignment of a rotor pole and a stator pole of a switched-reductance motor, said method comprising:

identifying a first phase of the motor as a target phase defining an initial position of the rotor pole that corresponds to the alignment of the rotor pole and the stator pole; and

subsequent to identifying the first phase of the motor as the target phase, exclusively exciting a second phase of the motor and the first phase of the motor in a sequential manner to thereby rotate the rotor pole to the initial position, the second phase being adjacent the first phase.

33. (New) A method for controlling an alignment of a rotor pole of a switched-reluctance motor to a target position between a first phase of the motor and a second phase of the motor, said method comprising:

aligning the first phase of the motor to thereby align the rotor pole to a stator pole adjacent the target position; and

subsequent to aligning the first phase of the motor, concurrently exciting a third phase of the motor and a fourth phase of the motor to thereby align the rotor pole to the target position.

34. (New) A method for controlling a rotation of a rotor of a switched-reluctance motor in a desired direction from a pre-alignment position, said method comprising:

cyclically exciting a plurality of phases of the switched-reluctance motor in a sequential manner to thereby crank the rotor in the desired direction from the pre-alignment position; and

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subsequent to cyclically exciting a plurality of phases of the switched-reluctance motor in a sequential manner, rotating the rotor in the desired direction to a holding position.

- 35. (New) A method for controlling a minimization of any heat losses by a switched-reluctance motor having a rotor in a holding position, said method comprising:

 rotating the rotor from a pre-alignment position to the holding position; and dithering the rotor upon the rotor being in the holding position for a predetermined time period.
- 36. (New) A method for controlling a minimization of any current losses by a switched-reluctance motor having a rotor in a holding position, said method comprising: rotating the rotor from a pre-alignment position to the holding position; and subsequent to rotating the rotor from a pre-alignment position to the holding position, reducing an ampere level of a phase current corresponding to the holding position as a function of a motor torque corresponding to the holding position.
- 37. (New) A device of controlling an operation of a switched-reluctance motor including a rotor having a rotor pole and a stator having a stator pole, said device comprising:

means for aligning the rotor pole and the stator pole in response to a reception of an actuation command; and

means for, subsequent to the aligning of the rotor pole and the stator pole, preliminarily cranking the rotor in a direction as dictated by the actuation command for a predetermined time period to thereby facilitate a subsequent rotation of the rotor to a holding position.

38. (New) The device of claim 37, further comprising:

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means for rotating the rotor to the holding position upon an expiration of the predetermined time period.

- 39. (New) The device of claim 38, further comprising: means for minimizing any current losses of the switched-reluctance motor subsequent to rotating the rotor to the holding position.
- 40. (New) The device of claim 38, further comprising:
 means for minimizing any heating losses of the switched-reluctance motor subsequent to rotating the rotor to the holding position.
- 41. (New) A device for controlling an alignment of a rotor pole and a stator pole of a switched-reluctance motor, said device comprising:

means for identifying a first phase of the motor as a target phase defining an initial position of the rotor pole that corresponds to the alignment of the rotor pole and the stator pole; and

means for, subsequent to identifying the first phase of the motor as the target phase, exclusively exciting a second phase of the motor and the first phase of the motor in a sequential manner to thereby rotate the rotor pole to the initial position, the second phase being adjacent the first phase.

42. (New) A device for controlling an alignment of a rotor pole of a switched-reluctance motor to a target position between a first phase of the motor and a second phase of the motor, said device comprising:

means for aligning the first phase of the motor to thereby align the rotor pole to a stator pole adjacent the target position; and

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means for, subsequently to aligning the first phase of the motor, concurrently exciting a third phase of the motor and a fourth phase of the motor to thereby align the rotor pole to the target position.

43. (New) A device for controlling a rotation of a rotor of a switched-reluctance motor in a desired direction from a pre-alignment position, said device comprising:

means for cyclically exciting a plurality of phases of the switched-reluctance motor in a sequential manner to thereby crank the rotor in the desired direction from the pre-alignment position; and

means for, subsequently to cyclically exciting a plurality of phases of the switched-reluctance motor in a sequential manner, rotating the rotor in the desired direction to a holding position.

44. (New) A device for controlling a minimization of any heat losses by a switched-reluctance motor having a rotor in a holding position, said device comprising:

means for rotating the rotor from a pre-alignment position to the holding position; and

means for dithering the rotor upon the rotor being in the holding position for a predetermined time period.

45. (New) A device for controlling a minimization of any current losses by a switched-reluctance motor having a rotor in a holding position, said device comprising:

means for rotating the rotor from a pre-alignment position to the holding position; and

means for, subsequent to rotating the rotor from the pre-alignment position to the holding position, reducing an ampere level of a phase current corresponding to the holding position as a function of a motor torque corresponding to the holding position.

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46. (New) A system, comprising.a switched-reluctance motor including a rotor having a rotor pole, and

a stator having a stator pole;

means for aligning the rotor pole and the stator pole in response to a reception of an actuation command, and

means for, subsequent to the aligning of the rotor pole and the stator pole, preliminarily cranking the rotor in a direction as dictated by the actuation command for a predetermined time period to thereby facilitate a subsequent rotation of the rotor to a holding position.

- 47. (New) The system of claim 37, further comprising:
 means for rotating the rotor to the holding position upon an expiration of the predetermined time period.
- 48. (New) The system of claim 47, further comprising:

 means for minimizing any current losses of the switched-reluctance motor subsequent to rotating the rotor to the holding position.
- 49. (New) The system of claim 47, further comprising:
 means for minimizing any heating losses of the switched-reluctance motor subsequent to rotating the rotor to the holding position.
- (New) A system, comprising:
 a switched-reluctance motor including
 a rotor having a rotor pole, and
 a stator having a stator pole;

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means for identifying a first phase of the motor as a target phase defining an initial position of the rotor pole that corresponds to the alignment of the rotor pole and the stator pole, and

means for, subsequent to identifying the first phase of the motor as the target phase, exclusively exciting a second phase of the motor and the first phase of the motor in a sequential manner to thereby rotate the rotor pole to the initial position, the second phase being adjacent the first phase.

51. (New) A system, comprising:

a switched-reluctance motor including

a rotor having a rotor pole, and

a stator having a stator pole;

means for aligning a first phase of the motor to thereby align the rotor pole to the stator pole adjacent a target position between a first phase of the motor and a second phase of the motor, and

means for, subsequently to aligning the first phase of the motor, concurrently exciting a third phase of the motor and a fourth phase of the motor to thereby align the rotor pole to the target position.

52. (New) A system, comprising:

a switched-reluctance motor including a rotor;

means for cyclically exciting a plurality of phases of the switched-reluctance motor in a sequential manner to thereby crank the rotor in the desired direction from a pre-alignment position; and

means for, subsequently to cyclically exciting a plurality of phases of the switched-reluctance motor in a sequential manner, rotating the rotor in the desired direction to a holding position.

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53. (New) A system, comprising:

a switched-reluctance motor including a rotor,

means for rotating the rotor from a pre-alignment position to a holding position;

and

means for dithering the rotor upon the rotor being in the holding position for a predetermined time period.

54. (New) A system, comprising:

a switched-reluctance motor including a rotor;

means for rotating the rotor from a pre-alignment position to a holding position;

and

means for, subsequent to rotating the rotor from the pre-alignment position to the holding position, reducing an ampere level of a phase current corresponding to the holding position as a function of a motor torque corresponding to the holding position.